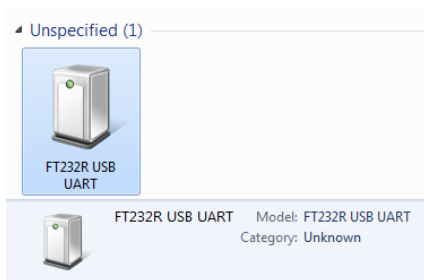


Brushless Gimbal

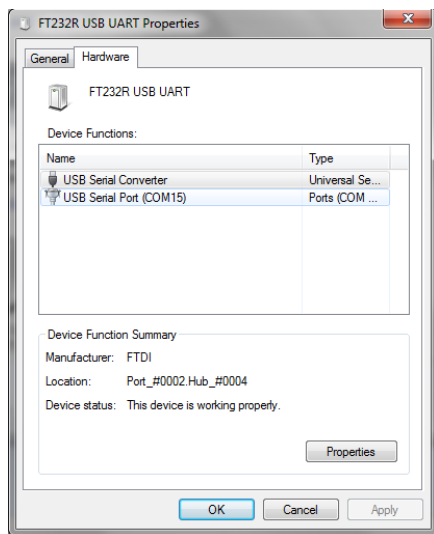
Worldwide first Open Source Brushlessgimbal Controller

Brushlessgimbal.de

when you receive any Brushless Gimbal Controller that is running the Open source project, you might run into some of the following problems when connecting to the computer. when connecting windows will install all the drivers for you but if it set's the com port above 9 when you go to connect to the GUI configuration software it will not connect.

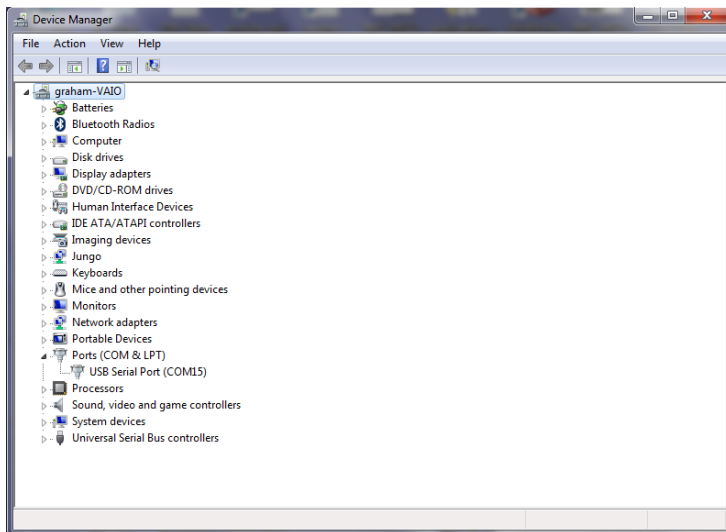


if you right click and go to properties you will see this next image



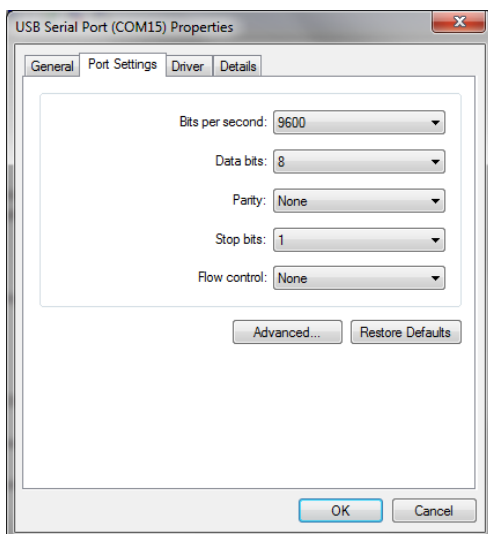
as you can see in this image windows has assigned COM 15, so this will not allow you to connect to the GUI So you need to change this to between COM 1 to 9 then you will be able to connect.

To change the COM port go to your computer icon on your desktop and right click and go to properties then click on device manager this will open

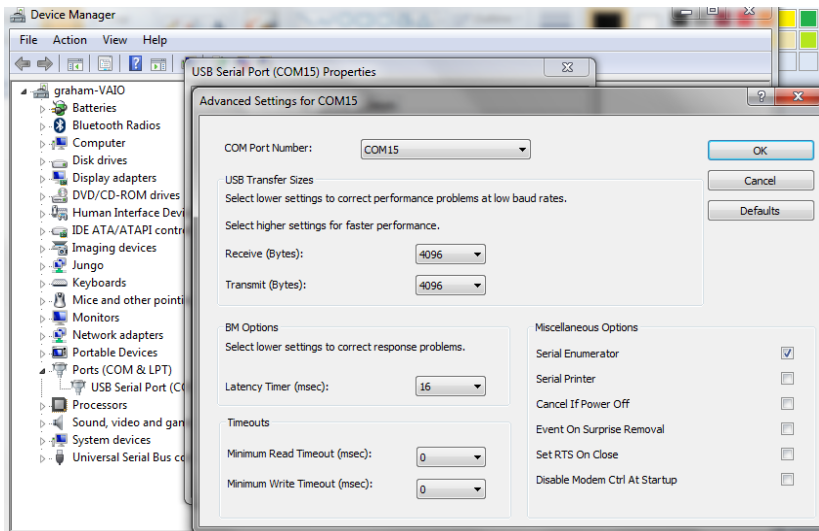


click on the USB Serial Port (COM15) and this will open

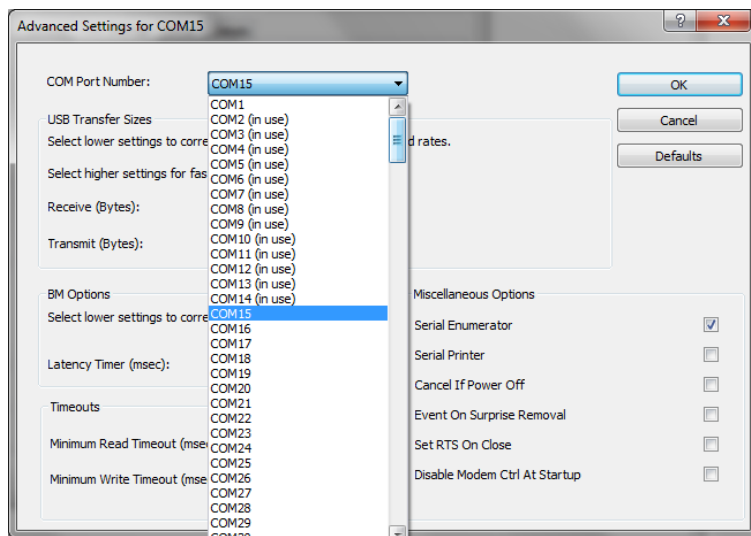
click on the Port Settings and you will see this image



this will open this image next



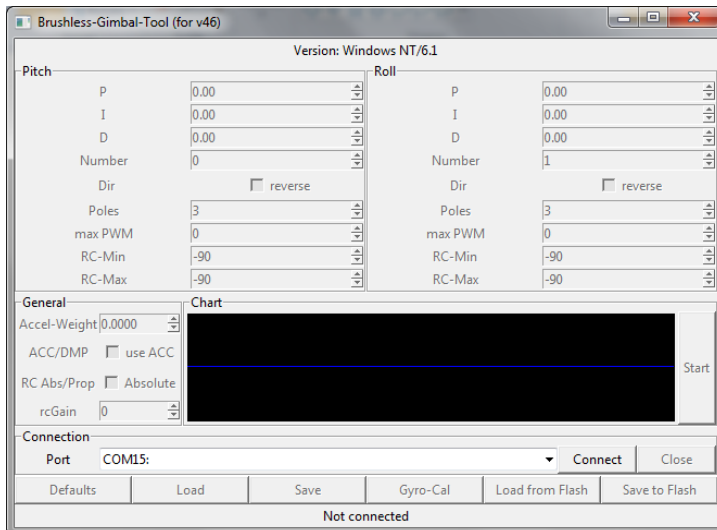
click on the com port settings tab and this will open



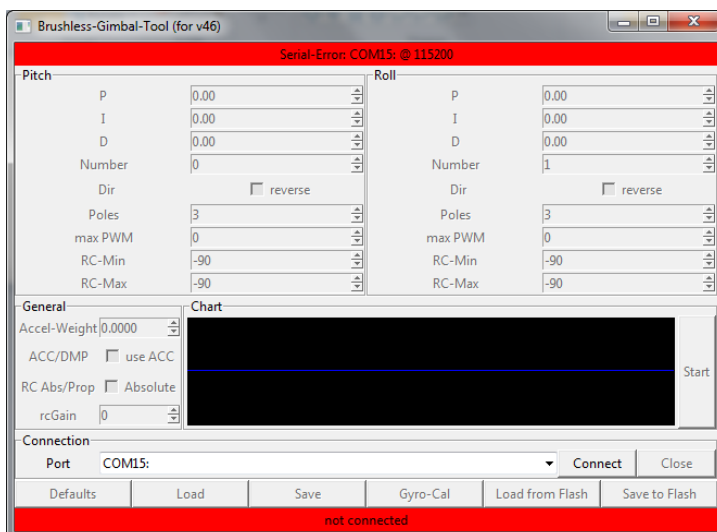
change this to a com port that is not in use (if you find that they are all in use) then select one that is between (1 to 9) and click OK.

The GUI

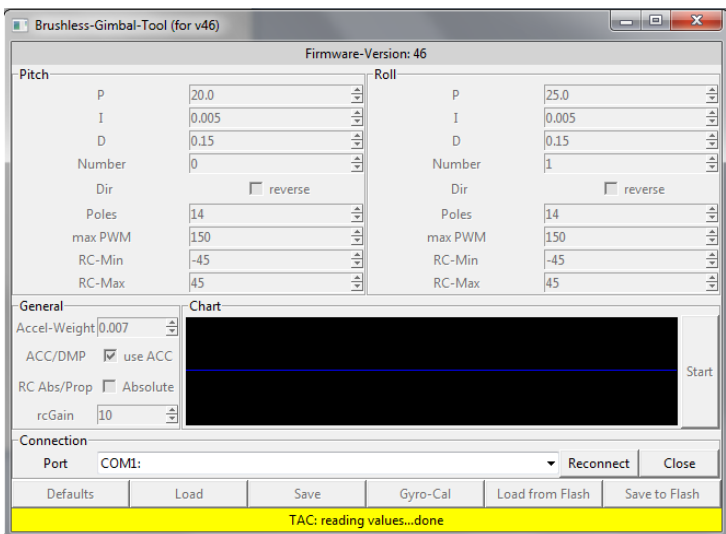
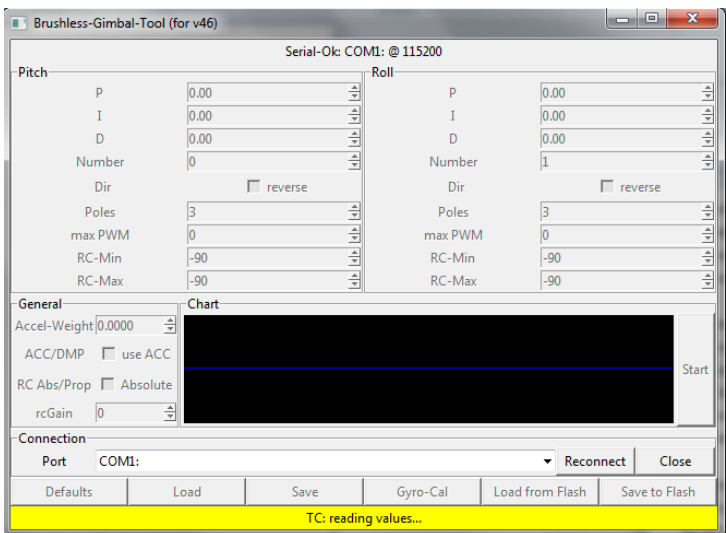
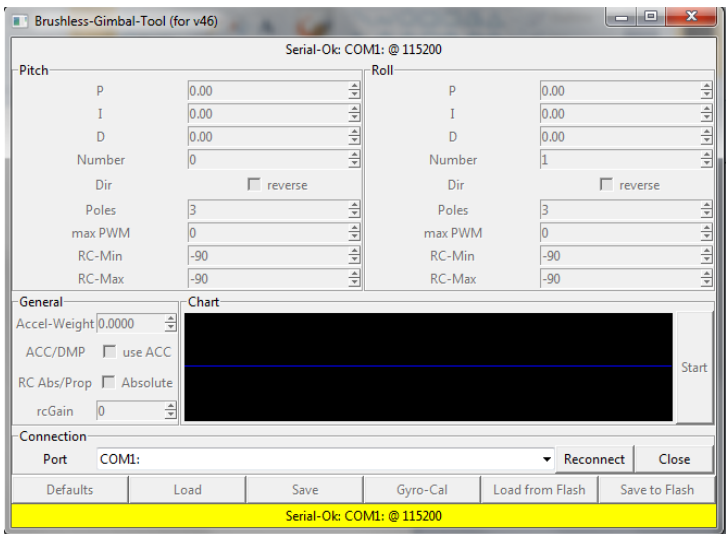
This is the software that you will use to adjust the setting on your Brushless Gimbal Controller

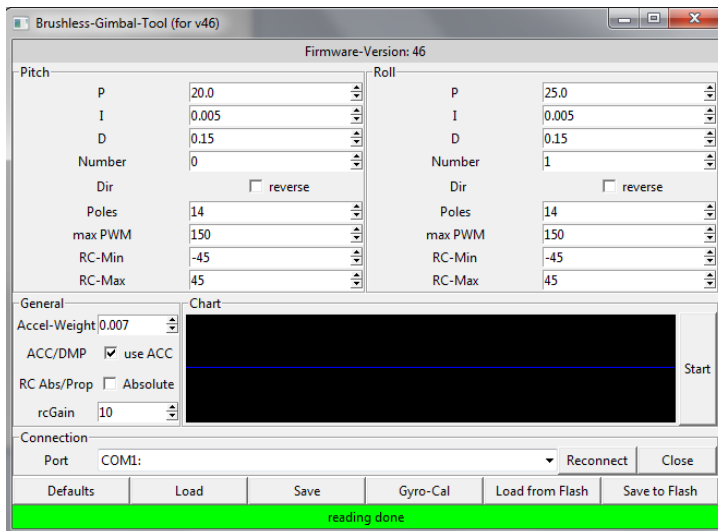


NOW if you have not changed the COM port as above then you will get this error

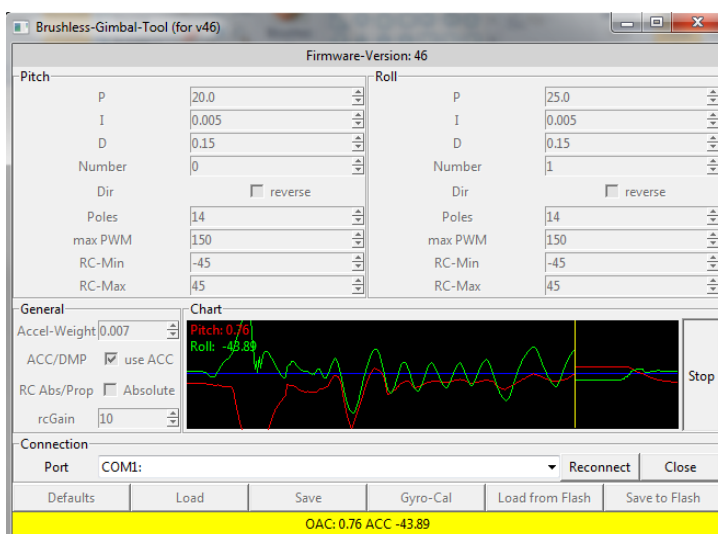
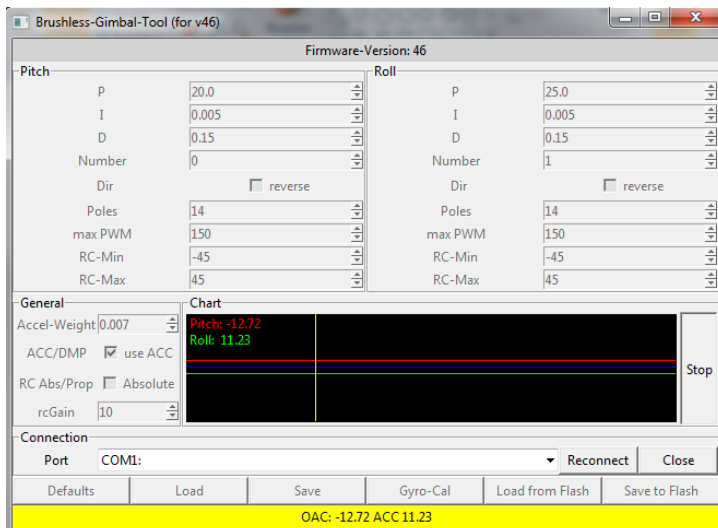


When you have made the changes to the Com Port then you should see the following images when you click Connect



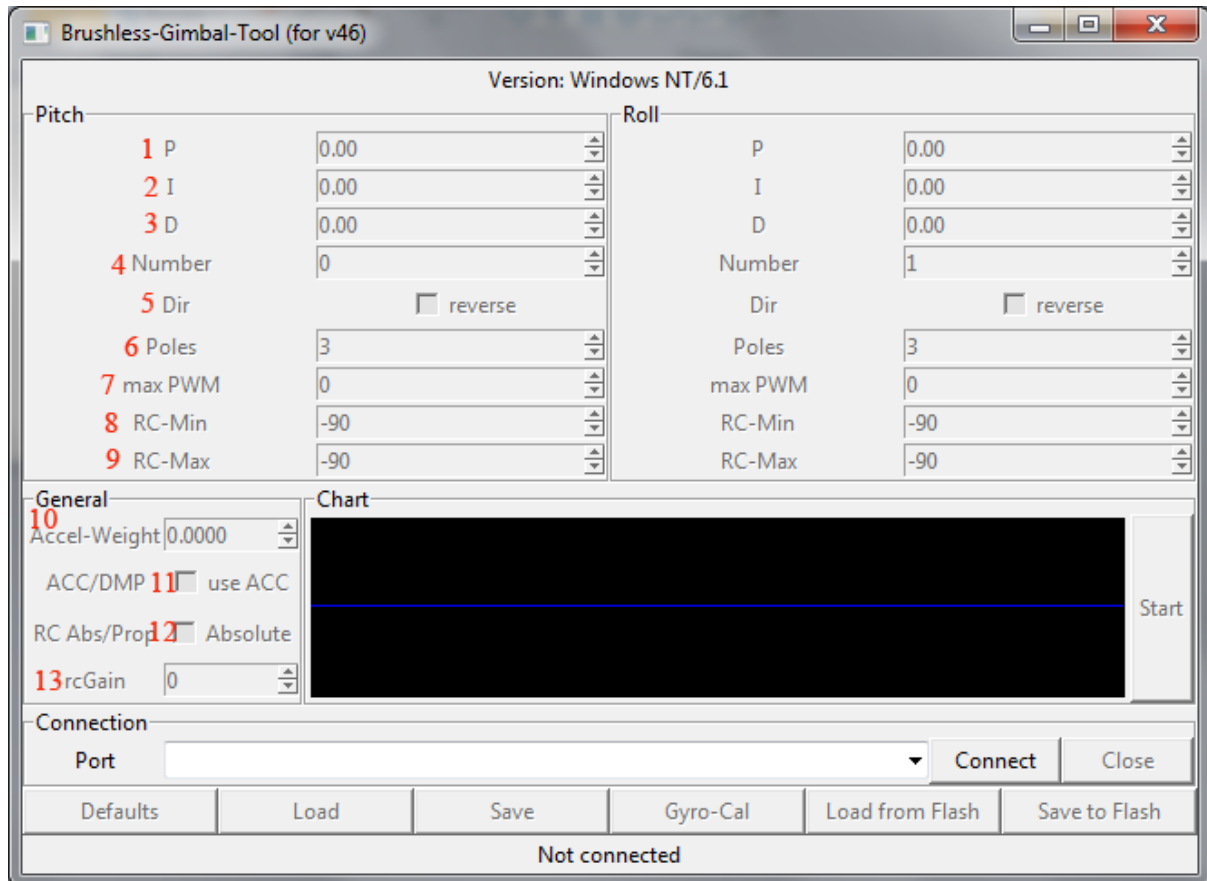


YES your connected to your Brushless Gimbal Controller. Now to check your Sensor reading please click on the Start button and you will see the following screens



Tuning your Gimbal

when you have uploaded the software and connect to your board, the software will load the default settings. You will need to change these to suit your gimbal and motors



1. First thing to do is to set the ACC-Weight to Zero (**Number 10**)
2. Next start to make it in 0,0005 steps high until the Gimbal does no more drift (what is drift)
when you set the ACC-Weight to Zero , the gimbal begin to move slowly to one side that is drift it will not sit level.
3. Next , adjust (increase) the P Term in 1.0 Steps (**Number 1**) stop when the movement is perfect if you go too far the motor will start to vibrate
4. minimize the MAX PWM Steps (**Number 7**) as much as possible this will also help to stop the vibration in the motor, when you have got NO vibration you are ready
5. If you still have some problems start to adjust the D Term in 0,005 steps higher until the motor stops vibrating.
6. (**Number 10**) is the ACC weight this is to eliminate the Drift from the Gyro.

7. **(Number 11)** is to switch between ACC and DMP Mode
ACC Mode is the better one , DMP is only to test it.
8. **(Number 12)** Absolute or Proportional mode is for RC Channel,
Proportional is when you are using a second RC Transmitter to control your Gimbal
Absolute for normal Pot control on your RC Transmitter.
9. **(Number 13)** Is the RC Gain , how fast it react when you are change you RC channel you
have it connected to.

Please note: **(Number 4)** is the motor, if you find that the wrong motor is connected you can just change the 0 to the 1 and this will save unplugging your motors.

(Number 5) is for reversing your motor if it is rotating in the wrong direction.

(Number 6) is the amount of poles your motor has.

(Number 8 & 9) is the amount or rotation your motor will make on that axis.

Software License :

<http://www.gnu.org/licenses/>

Arduino software:

<http://arduino.cc/en/Main/Software>

Latest Software:

<http://code.google.com/p/brushless-gimbal/downloads/list>

Credits

Manual: By Graham Miller

Brushless Gimbal: By Ludwig Faerber

GUI: By Meister

Software: By

Christian Winkler , Ludwig Faerber and Alexander Rehfeld

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